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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/721,587

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Mark D. Ackerman

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45842

7590

05/08/2006

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EXAMINER

ROBINSON, GRETA LEE

ART UNIT

PAPER NUMBER

2168

DATE MAILED: 05/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/721,587

Applicant(s)

ACKERMAN ET AL.

Examiner

Greta L. Robinson

Art Unit

2168

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-64 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-64 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 09/27/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. Claims 1-64 are pending in the present application.

#### ***Information Disclosure Statement***

2. The information disclosure statement filed September 27, 2004 fails to comply with 37 CFR 1.98(a)(1) and 37 CFR 1.198(b)(5), which requires the following: (1) a list of all patents, publications, applications, or other information submitted for consideration by the Office; (2) U.S. patents and U.S. patent application publications listed in a section separately from citations of other documents; (3) the application number of the application in which the information disclosure statement is being submitted on each page of the list; (4) a column that provides a blank space next to each document to be considered, for the examiner's initials; and (5) a heading that clearly indicates that the list is an information disclosure statement. (6) Each publication listed in an information disclosure statement must be identified by publisher, author (if any), title, relevant pages of the publication, date, and place of publication. The information disclosure statement has been placed in the application file, but the information referred to therein has not been considered.

#### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mathews et al. US Patent Application Publication No. 2003/0163479 A1 in view of Huttel et al. US Patent Application Publication No. 2003/0140027 A1.

Regarding claim 1, **Mathews et al.** teaches a computer, comprising: a memory [note: paragraphs 0058 and 0059 the invention can support multiple types of data storage technologies]; and

a data structure stored in the memory, the data structure including:

a definition of a first element, the definition of the first element including an element value field [note: paragraphs 0060 and 0053 relational database server acting as a data store];

a key identifier to identify a key value field to be used as a key in a data store [note: paragraph 0067 identifier; paragraph 0068 defined relationships; paragraph 0075;

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and Figure 8]. Although Mathews et al. teaches the invention substantially as cited above they do not explicitly disclose a key value field. **Huttel et al.** teaches a key value field that is assigned to a particular record [note: ValueKey field paragraph 0168; Figure 3A]. It would have been obvious to one of ordinary skill at the time of the invention to have combined Huttel et al. with Mathews because such a structure would enhance retrieval and storage of data.

Regarding claim 2, wherein: the definition of the first element includes the key identifier as property of the first element; and the key identifier identifies the element value field as the key value field [see: Mathews Figures 5-7 note Model Element].

Regarding claim 3, the definition of the first element includes a definition of the first attribute of the first element, the definition of the first attribute including the key identifier; and the key identifier identifies the element value field as the key value field [note: Mathews provides for defining a data store schema paragraph 0053; paragraph 0055 model defined attributes; paragraph 0067 method 513 element defines attributes].

Regarding claims 4-6, "wherein the definition of the first element includes a definition of a second attribute ...the definition of the second attribute includes the key identifier as a property of the second attribute ... the definition of the first element further includes a definition of a third attribute ...a second element; and a tree structure ... [note: Mathews et al. paragraph 0068 means to define relationships; also see 0053, 0055, 0067].

Regarding claim 7, further comprising: a second element; and a tree structure including the first element and second element [note: Mathews et al. paragraph 0068].

Regarding claim 8, wherein the key identifier identifies the key value field as one of a primary key, a secondary key, and a foreign key for the data store [note: Huttel et al. paragraphs 0168-0170 and paragraph 0012 foreign key].

Regarding claim 9, wherein the key identifier identifies the key value field as a foreign key for the data store; and the key identifier references a second data store [note: Huttel et al. paragraphs 0011, 0012].

Regarding claim 10, wherein the schema is eXtensible markup Language (XML) schema [note: Huttel et al. paragraphs 0019-0021].

Regarding claim 11, a computer system, comprising: a data store to store a first document; and

a first schema applicable to the first document, the first document, the first schema including:

a definition of a first element, the definition of the first element including an element value field; a first key identifier to identify a first key value field in the first document to be used as a key in a data store [note: Mathews et al. paragraph 0053 data store schema defines data structure].

Regarding claims 12-18, the definition of the first element includes the first key identifier as a property of the first element ... the definition of the element includes a definition of a first attribute ... wherein the definition of the first element includes a

definition of a second attribute ... the definition of the second attribute includes the first key identifier as a property of the second attribute ... the definition of the first element further includes a definition of a third attribute ... the data store operative to store a second document ....the first schema includes a first identifier for the first key value field [note: Mathews et al. paragraph 0053; paragraph 0055 model defined attributes; paragraph 0067 method 513 element defines attributes].

Regarding claims 19-26, wherein the data store is a Lightweight Directory Access protocol (LDAP) data store .... comprising a parser to parse the schema ..... the parser is operative to identify the first key value field in the schema .... Wherein the data store further includes an index associates with the first document .... Wherein the index is in the native format of the data store ..... the schema includes a definition of at least one of a second element and a fourth attribute .... The parser is operative to identify the second element .... The parser is operative to parse the schema into objects .... The first document is an eXtensible markup Language (XML) document .... [note: Mathews et al. paragraph 0005 and Huttel et al. Figure 2A].

Regarding claim 27, a method adding a document to a data store in a computer, comprising: accessing a schema for the document; locating a key value field in the document defined in the schema as a key; loading a value from the key value field; storing the value in the data store; and storing the document in the data store [note: Mathews et al. paragraph 0073 objects may be added; paragraphs 0054 and 0060 loads schema].

Regarding claims 28-37, further comprising indexing the documents in the data store ... wherein identifying a key value field includes: locating an element defined in the schema ... [note: Huttel et al. paragraphs 0011-0012, Figure 2A].

Regarding claims 38-42, defining a data store in a computer, comprising accessing a schema; locating an object defined in the schema as a key; defining a first data structure in the data store for the object; identifying the first data structure in the data store as a key data structure ... [note: Mathews et al. paragraphs 0051 and 0053; Huttel et al's KeyValue Field is a key data structure paragraph 0168].

Regarding claims 43-49, defining a schema in a computer, comprising defining a first element in the schema, the first element including an element value field ... [note: Mathews et al. paragraphs 0051, 0053 and 0064 additional object types may be specified].

The limitations of claims 50-64 have been addressed in claims 1-49; therefore they are rejected under the same rationale.

### ***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Murthy et al. US Patent Application Publication No. 2005/0055355 A1

Delo et al. US Patent Application Publication No. 2002/0059187 A1

Fiedler et al. US Patent Application Publication No. 2005/0021536 A1

Claborn et al. US Patent 6,708,186 B1




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6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Greta L. Robinson whose telephone number is (571)272-4118. The examiner can normally be reached on M-F 9:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim T. Vo can be reached on (571)272-3642. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Greta Robinson  
Primary Examiner

Greta Robinson  
Primary Examiner  
May 2, 2006